

## Problem Based Lesson - Create New Computer Lessons

Use this lesson plan when you want to fully develop a lesson or unit that has students use technology. The lesson plan is based on the NteQ Model (Morrison & Lowther, 2002) and includes basic guidelines for completing each section.

### NteQ Lesson Plan

Lesson Title: Keep the Candy	
Subject Area(s): Technology, Science, DWM	Grade Level: 8

#### SPI's in Content Area:

Try to pick broad standards or spi's with which your students have trouble. Remember that the best challenges will address standards from more than one content area.

8.10.spi.5 infer that human activities may be helpful or harmful to the environment.

#### ISTE Technology Standards:

Copy and Paste from <http://www.iste.org/standards/nets-for-students/nets-student-standards-2007.aspx>

##### 3. Research and Information Fluency

Students apply digital tools to gather, evaluate, and use information. Students:

- plan strategies to guide inquiry.
- locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
- evaluate and select information sources and digital tools based on the appropriateness to specific tasks.
- process data and report results.

### Materials

Computers	Paper (optional)
LCD projector	Hotlist, Tagged Bookmarks, or Customized Link Site
Directions (Scaffold) for using Presentation or Movie Software	

### Computer Functions and Data Manipulation

List computer function(s) that will be used in this lesson, the related computer application (e.g., database, spreadsheet), and describe how the data are to be manipulated (e.g., sorted, charted, placed in tables, drawn).

Computer Function <b>VERB</b>	Computer Application	Data Manipulation
<u>What students are doing</u>	<u>The program used</u>	<u>TSW....do what with the application? What will the students do?</u>
Research and Organization of Information	Safari, Firefox, or Explorer and Excel, Inspiration, or OneNote	TSW use the websites to research the use of positive reinforcements in schools and the pros and cons of using candy specifically. TSW organize the information found on a spreadsheet, graphic organizer, or in notebook form.
Presentation	Presentation or Movie Making program (PowerPoint, PhotoPeach, PhotoStory3, iMovie, Windows Movie Maker, etc.)	TSW create an original presentation that expresses ideas to an adult audience and is persuasive in nature.
Word Processing and Reflection	Word or OneNote	TSW write an original paragraph describing this experience and its success

## Specify Problem

Write in language you will use with students. For example, "Today, we are going to investigate..." "What would you do if...?"

When possible, give students REAL LIFE problems that matter to them. You can relate it to a standard. You can use it continually throughout the year. Put yourself in the seat of your students: what matters to you? what is something you, the student needs to know about? I know, I know...that's difficult when you have a pacing guide and specific spi's you must cover. Hypotheticals work in a pinch. For example: Your third grade teacher has asked you to create a power point explaining (topic?) in terms her 3<sup>rd</sup> graders can understand..." or give them a RAFT/Performance Assessment... "You have just won the bronze medal for skateboarding at the X Games. Using a power point presentation, explain 3 moves and how Newton's Laws of Motion enabled you to perform."

Rumor has it that candy may no longer be used to reward students. You probably aren't too happy about that. What if you had the power to change this rule? Research nutritional information about candy, the benefits of positive reinforcement, etc and make a power point presentation for the administration persuading them to allow candy & food rewards.

## Results Presentation

Write a brief description of how the students will demonstrate achievement of the objectives. For example, a written report, presentation, poster, web site.

TSW show their movie to the principal and/or school leadership team.

## Computer Activities

### Activity 1

Activities to be completed:

-Prior to going to computer

What do you need to do to get ready for the computer?

the student has been instructed in conducting research and noting information in an organized manner

-At the computer

TSW use the websites to research the use of positive reinforcements in schools and the pros and cons of using candy specifically. TSW organize the information found on a spreadsheet, graphic organizer, or in notebook form.

Copy & paste data manipulation from row 1 above

-After going to the computer

What follow up do they need?

the student will create a story board for the presentation

### Activity 2

Activities to be completed:

-Prior to going to computer

the student has completed activity 1

the student has had basic instruction regarding the use of the presentation applications or sites.

-At the computer

TSW create an original presentation that expresses ideas to an adult audience and is persuasive in nature.

Copy & paste data manipulation from row 2 above

-After going to the computer

students will meet with group to get feedback on presentation

### Activity 3

Activities to be completed:

-Prior to going to computer

students must have completed activities 1 and 2

-At the computer

TSW write an original paragraph describing this experience and its success

Copy & paste data manipulation from row 3 above

-After going to the computer

students will share paragraph with a partner, discuss, revise, and edit to produce final paper.

## Supporting Activities **Building activities before or Cumulative activities after this lesson**

<b>Activity 1</b> Activities to be completed:  <u>What will you do before and/or after this lesson?</u> <u>How will this lesson tie in with other lessons?</u>  Discuss positive reinforcements  Survey students on their like/dislike of candy as rewards	<b>Activity 2</b> Activities to be completed:  <u>For example: game, puzzle, guest speaker, watch a video, read a related story, learning center, ...doesn't have to be technology.</u>  School nurse talk to them about nutrition.	<b>Activity 3</b> Activities to be completed:  Lead students to global understanding of human activities on their environment
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### Rotation Plan

Briefly describe how students will rotate to and from the computer(s) and supporting activities.

Mobile lab will be reserved online in advance of the lesson, brought into the classroom, and students will use computers each class for 3 days

### Assessment

Use a template similar to the one below to develop your rubric(s). See page 51 of Section Three for rubric example. Morrison, G.R. & Lowther, D.L. (2002). *Integrating computer technology into the classroom* (2<sup>nd</sup>. Ed.).

Rubric must address Technology use and the student product itself as well as any other content-related criteria you may have.

Objective or Performance	Exemplary	Accomplished	Developing	Beginning	Score
Research	Above and beyond expectations	At least 5 reasons supported with research	3 or 4 reasons supported with research	2 or fewer reasons supported with research	
Persuasiveness	Above and beyond expectations	At least 5 slides have persuasive comments	3-4 slides have persuasive comments	Less than 3 slides have persuasive comments	
Grammar and usage	Above and beyond expectations	All sentences complete with proper punctuation and on topic	Most sentences complete with proper punctuation and on topic	Few sentences complete with proper punctuation and on topic	
Technology	Above and beyond expectations	At least 7 images or slides with transitions & hyperlinks to supporting websites or voice narration and appropriate credits	5-6 images or slides or frames with transitions & hyperlinks to supporting websites or voice narration and appropriate credits	Less than 5 slides with transitions & hyperlinks to supporting websites or voice narration and credits.	